

SUPPORT FOR THE AMENDMENT

Support for the amendment to claim 1 is found on pages 11 and 12 and examples 1-15 appearing on pages 19-32 of the specification. Support for claim 16 is found on page 11 and examples 1-8, 10, 14-15 in the specification. Support for claims 17 and 18 is found in example 7 and claim 5 as originally presented. Support for claim 19 is found in examples 1-7 in the specification. Support for claim 20 is found in claim 5 as originally presented. No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, claims 1 and 3-20 will now be active in this application.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a hair styling composition.

Applicants wish to thank examiner Venkat for the helpful and courteous discussion held with their U.S. representative on January 22, 2008. At that time, applicants' U.S. representative argued that improvements in stiffness, split ends and voluminosity of hair were realized through the combination of film forming polymer and diamide compound. The following is intended to expand upon the discussion with the examiner.

Hair styling as a cosmetic process can yield mixed results as the act of styling can often cause damage to the hair in terms of split ends and broken hair such that effective styling methods producing reduced split ends and broken hair are sought.

The claimed invention addresses the problem by providing a hair styling composition comprising a film forming polymer and specific diamide compounds. Applicants have discovered that the combination of a film-forming polymer and specific diamide provides for improvements in hair stiffness, a reduction in the percentage occurrence of split ends and broken hairs and voluminosity of hair, as compared with a film-forming polymer alone.

As evidence of such an improvement in stiffness, split ends and broken hairs and voluminosity of hair, the examiner's attention is directed to the data appearing on pages 19, 22 and 24, Tables 1, 2 and 3 of the above-identified specification which are reproduced below:

Table 1

(Wt.%)	Ex. 1	Ex. 2	Ex. 3	Comp. Ex. 1
Acrylamide/alkyl acrylate/methoxypolyethylene glycol methacrylate copolymer ¹⁾	6.0	6.0	6.0	6.0
Phosphoric acid (75 wt.%)	0.5	0.5	0.5	0.5
Diamide compound (F)	2.0	3.0	2.0	-
Cetyloxypropyl glyceryl methoxypropyl myristamide ²⁾	-	-	0.5	-
Ethyl alcohol	Balance	Balance	Balance	Balance
Stiffness	4.0	4.6	4.2	2.8
Percent occurrence of split ends and broken hairs	51	31	39	100

- 1) "RP77S", trade name; product of Kao Corporation
 2) "AQUACERAMIDE", trade name; product of Kao Corporation

Table 2

(Wt.%)	Ex. 4	Ex. 5	Ex. 6	Comp. Ex. 2
Vinylpyrrolidone/N,N-dimethylaminoethyl methacrylate copolymer diethyl sulfate ¹⁾	2.5	2.5	2.5	2.5
Diamide compound (F)	2.0	4.0	2.0	-
Collagen hydrolysate ²⁾	-	-	1.0	-
Polyoxyethylene (9) tridecyl ether	1.0	1.0	1.0	1.0
Ethanol	10.0	10.0	10.0	10.0
Purified water	Balance	Balance	Balance	Balance
Silkiness	4.0	4.8	4.6	1.8
Moisturized feel	4.0	4.6	4.2	1.6
Percent occurrence of split ends and broken hairs	62	53	67	100

3) "Gafquat 755N", trade name; product of Kao Corporation

4) "PROMOIS E-118D", trade name; product of Seiwa Chemical Industry Co., Ltd.

Table 3

(Wt.%)	Ex. 7	Comp. Ex. 3
Propylene glycol	3.0	3.0
Stearyltrimethylammonium chloride (28 wt.%)	1.0	1.0
Polyoxypropylene sorbitol	1.0	1.0
Polyoxyethylene hydrogenated castor oil	0.5	0.5
Polyoxyethylene tridecyl ether	1.0	1.0
Ethanol	10.0	10.0
Diamide compound (F)	2.0	-
Acrylamide/dimethyldiallylammonium chloride copolymer ¹⁾	1.5	1.5
Deionized water	Balance	Balance
Voluminosity (%)	46.3	61.0

1) "MERQUAT 550", trade name; product of Calgon Corp. (8.5 wt.% aqueous solution)

Comparative Example 1 of Table 1 illustrates a styling composition **in the absence of diamide compound (F)**, in the presence of principally only a film-forming polymer. Comparative Example 1 demonstrated a stiffness of only 2.8 and 100% occurrence of split ends and broken hairs.

In contrast, Examples 1-3, each contain the same film forming polymer **and** diamide compound (F), demonstrated greater stiffness and a significantly lower percentage occurrence of split ends and broken hairs ranging from only 31-51%. Thus, applicants observe an unexpected improvement in reduction of split ends and broken hairs as well as unexpected improvement in the stiffness for a hair styling composition containing both a film-forming polymer and a diamide compound.

Turning to the data in Table 3, Example 7 and Comparative Example 3 are identical composition but for the presence of a diamide compound in Example 7. In the presence of the diamide compound, the composition exhibited a voluminosity of only 46.3%, as compared with 61% in the absence of the diamide compound. Accordingly, the composition having the diamide compound exhibited an unexpectedly reduced voluminosity.

Table 2 illustrates compositions having the same components, varying the concentration of diamide as compared with a composition in the absence of diamide. The data shows a significantly reduced occurrence of split ends and broken hairs from the compositions containing both the film forming polymer and diamide as compared with the film forming polymer alone. Such results are nowhere disclosed or suggested in the cited art of record.

The rejections of claims 1-2, 5-11 and 15 under 35 U.S.C. § 103(a) in view of the combination of Hoshino et al. (U.S. 6,685,953) and Simon U.S. 2003/0008855 and of claims 12-14 in further view of DE 199 02 530 are respectfully traversed.

The combination of references fails to disclose or suggest an improvement in hair stiffness, split ends and broken hairs and voluminosity of hair.

Hoshino et al. merely describes dermatological preparations comprising diamide compounds. The object of the reference is described as maintaining and reinforcing the water retention capacity and barrier functions of the horny layer, preventing or remedying skin troubles, protecting the hair with a penetrated component improving the touch and feel of the hair, and preventing or remedying chapping of the scalp (column 1, lines 50-60). There is no disclosure or suggestion that a diamide compound in combination with a film-forming polymer would improve any one of hair stiffness, split ends and broken hairs and voluminosity of hair.

Simon has been cited for a disclosure of film-forming polymers (e.g. hair styling resins paragraphs [0028-29]). There is no suggestion that a combination of film-forming polymer and diamide would provide the observed improved hair performance.

DE '530 has merely been cited for a disclosure of a ceramide. There is no suggestion that a combination of film-forming polymer and diamide would provide the observed improved hair performance.

Thus, the combined disclosures of the references fails to suggest the observed improved hair performance resulting from the combination of film-forming polymer and diamide.

In contrast, applicants have discovered that a combination of film-forming polymer and diamide compound to provide improved performance in terms of stiffness, split ends and voluminosity of hair. Applicants note that the claims have been amended to recited specific diamide compounds which appear in the examples of applicants' specification. In view of applicants' demonstration of an improved hair performance, the claimed invention is not

obvious over the cited references and withdrawal of the rejections under 35 U.S.C. 103(a) is respectfully requested.

The provisional rejection of claims 1-2 and 5 under claims 1-2 of copending application 10/417,114 in view of U.S. 4,834,968 is respectfully traversed.

U.S. '114 fails to claim a film-forming polymer. Conversely, none of the present claims recite the claim element of U.S. '114 of an oxidative dye intermediate. As the claims of U.S. '114 fail to claim the claim limitation of a film-forming polymer and the present claims fail to claim the claim limitation of U.S. '114 of a dye, neither claims are obvious over the other. Not only are the two applications lacking claims to elements of the respective claims but the examiner has provided **no evidence** in support of her assertion that one of ordinary skill in the art would be motivated to add an oxidative dye intermediate into the claimed composition with the reasonable expectation of providing a styling hair dye or bleach. Applicants further note the fundamentally different uses of a hair styling composition which is a leave on type product and a hair dye/bleach which is a rinsed from the hair as part of its normal use.

While the office action cites to U.S. '968, paragraph bridging lines 3-4, applicants note that this reference described "coloring agents such as any FD&C or D&C dyes; hair oxidizing (bleaching) agents such as hydrogen peroxide, perborate salts and persulfate salts...", neither of which describes an oxidative dye intermediate comprising a developer and a coupler. Accordingly withdrawal of the provisional rejection for obviousness-type double patenting is respectfully requested.

The provisional rejection of claims 1-2 for nonstatutory obviousness-type double patenting over claims 1-4 of copending application 10/694,775 is respectfully traversed.

None of the claims of U.S. '775 claim the claim element of a film-forming polymer. Conversely, none of the claims of the above-identified application recite a higher alcohol or a

fatty acid or salt thereof. As such, neither set of claims are obvious over the other and accordingly, withdrawal of the provisional rejection for obviousness-type double patenting is respectfully requested.

Moreover, as provisional rejections, the examiner is respectfully requested to pass the above-identified application to issue and address the issue of obviousness-type double patenting in the still active cases.

Applicants submit that this application is now in condition for allowance and an early notification of such action is earnestly solicited.

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